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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,727	01/23/2004	Minggao Yao	12553/127	7335
25693 7590 01/26/2009 KENYON & KENYON LLP RIVERPARK TOWERS, SUITE 600 333 W. SAN CARLOS ST. SAN JOSE, CA 95110				
EXAMINER RENNER, CRAIG A				
ART UNIT 2627		PAPER NUMBER		
MAIL DATE 01/26/2009		DELIVERY MODE PAPER		

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MINGGAO YAO and MASASHI SHIRAISHI

Appeal 2008-5277
Application 10/763,727
Technology Center 2600

Decided: January 26, 2009

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,
and CARL W. WHITEHEAD, JR., *Administrative Patent Judges*.

WHITEHEAD, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 10-21 (see Br. 2, Final Rejection, mailed October 11, 2006). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

I. STATEMENT OF THE CASE

Appellants invented a multi-layered piezoelectric actuator to improve the recording density of hard disk drives. (*See generally* Spec. 2-3)

Claim 10, which further illustrates the invention, follows:

10. An actuator component comprising:

at least one layer of electrically-conductive material; and

at least one layer of electrically-insulative material, wherein

said conductive material and said insulative material are to be applied to an actuator finger one layer upon another in an alternating manner, and

said layer of insulative material is wider than said layer of conductive material such that an insulative layer, applied to said actuator finger and sandwiching a conductive layer between said insulative layer and said actuator finger, at least partially encloses and electrically isolates said conductive layer latitudinal to said actuator finger.

The Examiner relies upon the following prior art references to show unpatentability:

Shiraishi

JP 2002-74870 A

Mar. 15, 2002

Claims 10, 13-16 and 19-21 stand rejected under 35 U.S.C. § 102(a) as being unpatentable Shiraishi.

Claims 11, 12, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shiraishi.

Rather than repeat the arguments of the Appellants or the Examiner, we refer to the Briefs and the Answer for their respective details. In this decision, we have only considered those arguments actually set forth by the Appellants. Arguments in which the Appellants could have made but did not make in the Briefs filed have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37 (c)(1)(vii).

ISSUE

The issue before us is whether the Appellants have shown that the Examiner erred in finding that Shiraishi anticipates the limitations of claims 10, 13-16 and 19-21? Further, have the Appellants shown that the Examiner erred in finding that Shiraishi renders the limitations in claims 11, 12, 17 and 18 obvious? The issue turns on whether the Shiraishi reference discloses sandwiching a conductive layer between an insulative layer and an actuator as claimed by the Appellants.

FINDINGS OF FACT

1. Figure 7a of the Appellants' invention shows a cross sectional view, element 704, of the claimed invention, elements 712 are conductive materials such as gold, platinum or copper, elements 714 are insulative materials such as piezoelectric layers and elements 716 are bonding pads (Spec. 5-6).

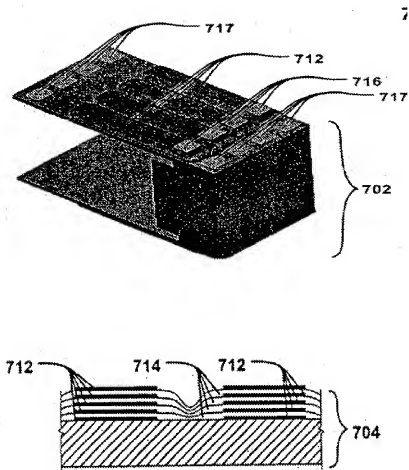


Fig. 7a

Figure 7a shows a cross sectional view of micro-actuator arm of the claimed invention.

2. Figure 5 of Shiraishi shows an actuator, element 22, having a pair of movable arms, elements 51 and 52; arm members, elements 51a and 51b; piezoelectric members, elements 51b and 52b; slider adhesion portion, element 53; and base, element 50.

Figure 5 of Shiraishi

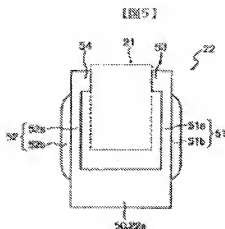


Figure 5 shows an actuator having movable arms.

3. Figure 6 of Shiraishi shows a cross sectional view of the piezoelectric members; elements 51b and 52b; ground electrodes, elements 62; signal electrodes, element 61 and piezoelectric members, elements 60.

Figure 6 of Shiraishi

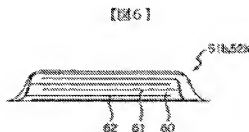


Figure 6 shows a cross sectional view of the piezoelectric member of the Shiraishi actuator.

PRINCIPLES OF LAW

"[T]he PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)).

"A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976)).

If the Examiner's burden is met, the burden then shifts to the Appellants to overcome the *prima facie* case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS

Appellants argue that elements 60, 61 and 52a of Shiraishi do not represent what the Examiner stated them to be (App. Br. 5-6). According to Appellants, element 60 is not the same as the insulative material of the claimed invention, element 61 is not the same as the conductive material of the claimed invention and element 51a is not the same as the actuator finger of the claimed invention (App. Br. 5). The Appellants, however, fail to

provide evidence or convincing arguments as to why the Examiner's characterization of the elements is incorrect. Therefore the Examiner's characterization of the elements is considered to be correct. "As discussed in *In re Piasecki*, the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant." See *In re Oetiker*, 977 F.2d at 1445.

The Appellants also argue that the acceptance of the Examiner's characterization of the Shiraishi's elements does not resolve the fact that, "[i]n order to show an embodiment wherein *a conductive layer is sandwiched between the insulative layer and the actuator finger*, the Shiraishi reference would need to show element 61 *sandwiched between* element 60 and element 52a." (App. Br. 6). Appellants' arguments however are not commensurate with the scope of claim 10. Claim 10 states, "An actuator component comprising . . . " (App Br. A-1). The direct spatial interpretation set forth by the Appellants is not persuasive because the "comprising" terminology employed in the claims is considered to be open-ended. Therefore the direct laying or sandwiching advocated by the Appellants is not persuasive because other elements and other layers can be positioned within the framework of Shiraishi's invention without affecting the anticipatory significance of Shiraishi.

The MPEP specifically provides that "[t]he transitional term 'comprising,' ... is synonymous with 'including,' 'containing,' or 'characterized by,' [and] is open-ended and does not exclude additional, unrecited

elements or method steps.” MPEP, 8th ed., rev. 1 § 2111.03 (2003); *see, e.g., Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (“‘Comprising is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.”). Thus, neither the dictionary nor the MPEP provides a definition for “containing” that excludes additional, unnamed ingredients.

See Mars, Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1375-76 (Fed. Cir. 2004).

Figure 6 of Shiraishi discloses a piezoelectric insulative material (60) sandwiching conductive layers (61 and/or 62) between the actuator arm (FF2 and FF3). Claim 10 is not distinguishable over the Shiraishi invention.

The Appellants further argue that the piezoelectric multilayer element of Shiraishi fails to anticipate claim 10 because its orientation is on the side of the actuator as opposed to the top of the actuator as claimed. (App. Br. 6). This is not persuasive because the orientation of the multilayer element is subject to reasonable interpretation by the Examiner. *See Bigio*, 381 F.3d at 1324. Claim 10 does not disclose the top/side orientation argued by the Appellants (App. Br. A-1) and therefore, the Appellants arguments are not commensurate with the scope of claim 10. However, Shiraishi discloses positioning the piezoelectric multilayer element on the top portion of the side of the actuator (FF2). Shiraishi’s orientation is the same claimed in claim 10 (App. Br. A-1).

Thus, the 35 U.S.C. § 102(a) rejection of claims 10, 13-16 and 19-21 over Shiraishi will be sustained.

The 35 U.S.C. § 103(a) rejection of claims 11, 12, 17 and 18 over Shiraishi will be sustained since the arguments presented by the Appellants are the same for both rejections. (App. Br. 8).

CONCLUSION OF LAW

The Appellants have not shown that the Examiner erred in finding that Shiraishi both anticipates the limitations of claims 10, 13-16 and 19-21 and renders the limitations in claims 11, 12, 17 and 18 obvious.

DECISION

The Examiner's decision rejecting claims 10-21 is affirmed.

No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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